APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,242	08/27/2001	Michael L. Van De Vanter	004-4911-1	7182

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EXAMINER
INGBERG, TODD D

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/940,242	VAN DE VANTER ET AL.
	Examiner	Art Unit	
	Todd Ingberg	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 April 2003</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>27 August 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date <u>4/4/03, 10/9/2001</u>.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claims 1 – 30 have been examined.

Continued Prosecution Application

1.   The request filed on August 27, 2001 for a Continuation In Part Application (CIP) under

37 CFR 1.53(d) based on parent Application No. 09/587,171 is .acceptable.

Information Disclosure Statement

2.   The Information Disclosure Statements filed April 4, 2003 and October 9, 2001 have

been considered.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

4.   Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention. The Examiner can not understand the context of these limitations given the prior

claim limitations. The Examiner will interpret the limitation to have a disk drive.

Claim 29
The computer program product of claim 25, wherein the at least one computer readable medium
is selected from the set of a disk, tape or other magnetic, optical, or electronic storage medium
and a network, wireline, wireless or other communications medium.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 1 – 15, 19, 21 - 30 are rejected under 35 U.S.C. 102(b) as being anticipated by

USPN 6,311,323 **Shulman** et al.

Examiner's Note: Applicant has taken a low level formal approach to claiming the grammar of

their invention. The rejection will focus on the functionality which is supported by the claimed

invention and anticipated by the Shulman reference.

Claim 1
Shulman anticipates an interactive software engineering tool(**Shulman**, Abstract, real time tool) that, for distinct portions of a single unit of source code(**Shulman**, figure 4, mytext.f) thereof with behavior according to a corresponding set of lexical rules(Shulman, lexical rules for matching portions of an object to object grammar), wherein transition of the behavior from that in accordance with a first lexical context (the portion as displayed) to that in accordance with a second lexical context (the response in the select window provides the object selections which complete the object grammar) is based on recognition of an opening boundary token (the period is an open boundary token) according to the first lexical context and without use of a structural command to the interactive software engineering tool (The select box appeared via an interpreter based on the open boundary token and partial grammar).

Claim 2
An interactive software engineering tool as recited in claim 1, wherein the behavior includes linguistically-driven typography. (The example depicted in Figure 4 as described in claim 1 is linguistically driven – The rejection as per claim 1).

Claim 3
An interactive software engineering tool as recited in claim 1, wherein the behavior includes lexical analysis of text based on a then operative one of the first and the second lexical contexts. The rejection as per claim 1

Claim 4
An interactive software engineering tool as recited in claim 1, wherein the distinct portions are delimited by the opening boundary token and a corresponding, automatically-added closing boundary token. The rejection as per claim 1 – the selection of the method from the select box closes the boundary token.

Claim 5
An interactive software engineering tool as recited in claim 1, wherein the first and second lexical contexts respectively correspond to one of: a source language lexical context and a textual comment lexical context; a source language lexical context and a string literal lexical context; a

source language lexical context and a character lexical context; and first and second source language lexical contexts. The rejection as per claim 1

Claim 6
An interactive software engineering tool as recited in claim 1, wherein the single unit of source code is one of a line, statement or phrase; a function, procedure or **method**; and a markup language element, thereof. The rejection as per claim 1

Claim 7
An interactive software engineering tool that, in response to introduction of a language-defined opening boundary token at a cursor position in an edit buffer, automatically inserts a corresponding closing boundary token, such that display of edit buffer content past the cursor position maintains its pre-introduction association with a first lexical context and with linguistically-driven typography therefor, while subsequent entry at the cursor position is subject to a second lexical context. As per claim 1 the edit buffer being the contents of the buffer containing the method.

Claim 8
An interactive software engineering tool as recited in claim 7, wherein display of symbols entered into the second lexical context is in accordance with linguistically-driven typography distinct from that employed in the first lexical context. As per claim 2.

Claim 9
An interactive software engineering tool as recited in claim 7, wherein lexical analysis of symbols entered into the second lexical context is in accordance with lexical rules distinct from that employed for the first lexical context. As per claim 1.

Claim 10
An interactive software engineering tool as recited in claim 7, wherein the second lexical context is delimited by the opening and closing boundary tokens. As per claim 1.

Claim 11
An interactive software engineering tool as recited in claim 7, wherein the first and second lexical contexts respectively correspond to one of source language lexical context and a textual comment lexical context; a source language lexical context and a string literal lexical context; a source language lexical context and a character lexical context; and first and second source language lexical contexts. As per claim 1.

Claim 12
Shulman anticipates a method of operating an interactive software engineering tool, the method comprising: rendering a display presentation corresponding to a unit of source code, said display presentation corresponding to at least a first lexical context operative at an insertion point; recognizing interactive entry of an opening boundary token at the insertion point; and in response to said recognition of said opening boundary token, creating a second lexical context operative

for subsequent interactive entry at the insertion point, wherein the second lexical context is delimited by said opening boundary token ;and a position in the source code immediately following the insertion point, wherein said opening boundary token is a valid lexical token in accordance with one of the first and the second lexical context and not a nonlexical, structural command to the interactive software engineering tool. The rejection as per claim 1

Claim 13
A method as recited in claim 12, further comprising: in response to said recognition of said opening boundary token, automatically inserting at said position in the source code immediately following the insertion point, a closing boundary token. The rejection as per claim 1

Claim 14
A method as recited in claim 12, wherein stylistic rules applied to rendering of symbols within the second lexical context differ from those applied to rendering of symbols within the first lexical context. The rejection as per claim 1

Claim 15
A method as recited in claim 12, wherein lexical rules applied to recognition of tokens within the second lexical context differ from those applied to recognition of tokens within the first lexical context. The rejection as per claim 1

Claim 19
A method as recited in claim 12, wherein the first and second lexical contexts correspond to respective programming language lexical contexts. The rejection as per claim 1

Claim 21
A method as recited in claim 12, wherein transitions between the first and second lexical contexts are performed in response to navigation events and in response to entry of valid lexical tokens such that the transitions are transparent to a user of the interactive software engineering tool. The rejection as per claim 1

Claim 22
A method as recited in claim 12, wherein transitions between the first and second lexical contexts are performed in response to navigation events and in response to entry of valid lexical tokens such. that a user of the interactive software engineering tool need not employ structural commands therefor. The rejection as per claim 1

Claim 23
A method as recited in claim 12, wherein the interactive software engineering tool includes one or more of **an editor**; (Shulman, real time tool is showing an editor)
a source-level debugger; and a source analyzer.

Claim 24

A method as recited in claim 12, wherein said unit of source code includes one or more of: a line; **a statement**; a markup language element; and a function or procedure. The rejection as per claim 1

Claim 25
A computer program product. encoded in at least one computer readable medium and comprising: functionally-descriptive encodings of at least first and second language contexts; and instructions at least partially implementing a source, code editor that invokes the second language context nested within the first language context based solely on recognition of a boundary token defined by the first language context and entered at the cursor position, while maintaining pre-existing language context past the cursor position. The rejection as per claim 1

Claim 26
The computer program product of claim 25, embodied as one or more of: **an editor**; a source-level debugger; and a source analyzer. As per claim 23.

Claim 27
The computer program product of claim 25, embodied, at least in part, as a language specialization component for integration with a software engineering tool. The rejection as per claim 1

Claim 28
The computer program product of claim 25, supplied, at least in part, via a communications medium for execution on a computer coupled thereto. The rejection as per claim 1 - monitor

Claim 29
The computer program product of claim 25, wherein the at least one computer readable medium is selected from the set of a disk, tape or other magnetic, optical, or electronic storage medium and a network, wireline, wireless or other **communications medium**. As per claim 28.

Claim 30
A computer system comprising: a display; memory; a language-based editor program executable thereby; and a buffer defined by the source code editor program and instantiable in the memory, wherein the language-based editor program renders contents of the buffer to the display in accordance with an associated language context, and wherein the language-based editor program recognizes entry of a transitional opening token defined by a first language context and, in response thereto, associates text subsequently entered into the buffer at an insertion point thereof with a second language context, while maintaining a pre-existing association between the first language context and contents of the buffer past the insertion point. As per claim 1 the buffer being the storage area in memory of the selection of the selected method.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 16 – 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Shulman in view of the design choice of programming an opening boundary token. The

programming of a character to be matched is well within the ordinary skill of an ordinary artisian

prior to the time of invention. Therefore it would have been obvious to select a double quote OR

single quote OR double slash OR slash and two asterisks, because the system needs a identifier

to invoke the embedding feature.

For claims 16 – 18 the choice of what character to use is a design choice. Even the Specification

expressly states the list is not limited to those specific.

Claim 16
A method as recited in claim 12, wherein the first lexical context is a programming language lexical context; wherein the second lexical context is string literal lexical context; and wherein the opening boundary token is a quote (") character.

Claim 17
A method as recited in claim 12, wherein the first lexical context is a programming language lexical context; wherein the second lexical context is character lexical context; and wherein the opening boundary token is a single quote (') character.

Claim 18
A method as recited in claim 12, wherein the first lexical context is a programming language lexical context; wherein the second lexical context is textual comment lexical context; and wherein the opening boundary token is one of: a multiple line comment token (/*); a single line comment token (//); and a document type comment token (/**).

9.   Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shulman in view

of SGML as taught by Shafer USPN 5,583,762.

Shulman teaches the embedded lexical content features but does not explicitly mention the use

in a markup language. It is Shafer who mentions the use of markup languages (**Shafer**, Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings

of Shulman and Shafer because the markup languages like other programming languages contain

known constructs that can benefit from tools like Shulman that make the statements syntax

correct.

Claim 20
A method as recited in claim 12, wherein at least one of the first and second lexical contexts is a
markup language lexical context.

Correspondence Information

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Todd Ingberg** whose telephone number is (703) 305-9775. The

examiner can normally be reached during the following hours:

Monday	Tuesday	Wednesday	Thursday	Friday
6:15 – 1:30	6:15- 3:45	6:15 – 4:45	6:15-3:45	6:15-130

This schedule began December 1, 2003 and is subject to change.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Kakali Chaki** can be reached on (703) 305-9662. Please, note that as of August 4,

2003 the **FAX number** changed for the organization where this application or proceeding is

assigned is **(703) 872-9306**.

Also, be advised the United States Patent Office **new address** is
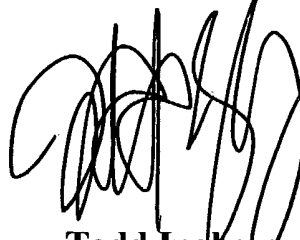
Post Office Box 1450

Alexandria, Virginia 22313-1450

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-9700.

Todd Ingberg
Primary Examiner
Art Unit 2124
May 31, 2004